

Protecting the Monarch

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Neal Smith National Wildlife Refuge



Part I: Overview of Business

The mission of Neal Smith National Wildlife Refuge is to actively protect, restore, reconstruct and manage the diverse native ecosystems of tallgrass prairie, oak savanna, and sedge meadow. The Refuge serves as a major environmental education, volunteer and outdoor recreation hub for people of all ages and backgrounds to enjoy.

Part II: Job Specifics

The biologist at Neal Smith collects data for the U.S. Fish and Wildlife Service that helps to monitor the health of the ecosystems present at Neal Smith Wildlife Refuge

Many wildlife and vegetation surveys are conducted (finding and counting different species that should be present in the tallgrass prairie, oak savanna, and sedge meadow ecosystems at Neal Smith).

One of the surveys at Neal Smith is the monitoring of milkweed, pollinator plants, and the monarch butterfly in a collaboration with many scientists nationwide to restore the Monarch population.

Part III: Introduce the Problem

Monarchs are beautiful butterflies that have one of the longest migrations of any butterfly species. However, their population has been decreasing over the last 20 years and they are at risk of being endangered. Their decrease in population is due to climate change, pesticide use, and a deterioration of their natural habitat.

Part IV: Background

Students will need to know about the Monarch butterfly, their migration pattern, and their natural habitat. It would be helpful for students to identify native milkweed species and pollinator plants that monarchs commonly nectar from. Students should also have some background knowledge on what can be done to restore the monarch population.

Students may find the following information helpful to their efforts:

[Monarch Information - Kid Friendly](#)

[U.S. Fish and Wildlife Monarch Information](#)

Citizen Science Data Collection Options

- [Journey North](#)
- [Nature's Notebook](#)
- [Monarch Watch Tagging](#)

Part V: Business Solution

The U.S. Fish and Wildlife Service(FWS) is working tirelessly to monitor the populations of monarch butterflies throughout the nation. They are hoping to have enough data by 2019 to protect the Monarch under the endangered species act. The data they are collecting includes adult monarch sightings, eggs found on milkweed, larvae found on milkweed, and milkweed plants present on certain plots around the U.S. The U.S.FWS also relies on citizen science, which is everyday people submitting sightings and data to national databases.

In attempt to restore the native habitats of the monarch Neal Smith has worked to restore their own 800,000 acres of land to native prairie, as well as set up programs like "People for Pollinators", which provides free prairie plants and education to schools, individual homes, and community business.

Part VI: Student Solutions

Students will hopefully come to the conclusion that monarch conservation is a vital piece of environmental work in Iowa today. They may decide that monitoring the sightings of Monarchs will aid the U.S. Fish and Wildlife data that can help protect the Monarch under the endangered species act. They could also come to the conclusion that we need to restore more native habitats, including milkweed plants, throughout the united states. Maybe they will brainstorm new and innovative ideas to help protect the Monarch butterfly.